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## The misplaced genus *Trischidocera* Villeneuve (Diptera, Tachinidae)

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### Abstract

*Trischidocera* Villeneuve, 1915 includes two species, *T. sauteri* Villeneuve, 1915 (Taiwan and Malaysia) and *T. yunnanensis* Chao & Zhou, 1987 (China). The systematic placement of *Trischidocera* has been controversial. It was originally placed within the “Thryptoceratidae” (= “Actiidae”), then moved to Germariini, then considered an unplaced Tachinidae, and more recently placed in Ormiini. Here, the genus is revised, the type-species is redescribed and illustrated, and its systematic placement is discussed. The genus is removed from Ormiini and considered *incertae sedis*.

**Key words:** Germariini, Ormiini, revision, Siphonini, systematics, taxonomy

### Introduction

*Trischidocera* was erected by Villeneuve (1915) for the new species *T. sauteri* based on three males from Taiwan. Villeneuve originally placed the new genus in “Thryptoceratidae”, a family-group name proposed by Robineau-Desvoidy (1851) for a group of genera, which would be equivalent to the “Actiidae” of Bigot (1882). Townsend (1932) provided some notes on *T. sauteri* and placed the genus in “Actiini”. Thereafter, Townsend (1936, 1939) transferred *Trischidocera* to Germariini with the following note (1939: 358): “While this form exhibits strong actiine characters, the exposed sternites, bare prosternum and undeveloped IPAL [intrapostalar seta] combine to bring it here in the keys.” Townsend (1939) also synonymized *Orectocerina* Malloch, 1924 with *Trischidocera*.

Crosskey (1976) listed *Trischidocera* in the final section of his Oriental conspectus as an unplaced Tachinidae, and keyed it in the key to tribes but put it apart from any tribe. Crosskey (1976) explicitly doubted the synonymy of *Orectocerina atratula* Malloch (Malaysia) with *T. sauteri* (Taiwan) proposed by Townsend (1939). He wrote “It appears possible that distinct species are involved.” But his doubt was probably due to the strong dimorphism between the male holotype of *T. sauteri* and the female holotype of *O. atratula*.

Chao & Zhou (1987) described a second species, *T. yunnanensis*, from China (Yunnan). While the male postpedicel of *T. sauteri* is trilobed and notably elongate, in *T. yunnanensis* it is simple (not-trilobed), although the distally inserted arista is shared by both species. The terminal arista in *T. yunnanensis* results in an aberrant form resembling a stylate antenna.

In *Flies of China*, Chao *et al.* (1998: 1957) curiously included *Trischidocera* within Ormiini. They did not provide any argument supporting this new placement. More recently, the Chinese catalogue by O’Hara *et al.* (2009: 161) only maintained this last placement.

For this study, I examined one paralectotype male of *T. sauteri* Villeneuve, photographs of the holotype female and paratype male of *Orectocerina atratula* Malloch (= *T. sauteri*), and holotype male of *T. yunnanensis* Chao & Zhou. Based on the available evidence, I consider the genus *Trischidocera* as *incertae sedis*, remove it from the tribe Ormiini, and relegate it to the unplaced Tachinidae. Despite this placement, a discussion is provided below considering the possible systematic placement of *Trischidocera* in the tribe Siphonini or near it.

the group, for many Siphonini species present the condition observed in *Trischidocera*). Additionally, the two proclinate fronto-orbital setae common in many Siphonini are apparently absent in *Trischidocera*, which has a row of short setulae on the entire extent of the fronto-orbital plate. On the scutellum, the discal setae are absent, and subapical setae are parallel to each other, not crossed.

Cerretti *et al.* (2014) performed the first cladistic analysis of the family Tachinidae, although the taxonomic sampling was nearly exclusively Palaearctic taxa (only 1 Oriental, 1 Nearctic and 8 Afrotropical tachinid representatives were included in their analysis along with 482 Palaearctic species). According to the available cladograms so far for Palaearctic Tachinidae, the Siphonini clade was supported by only two synapomorphies, namely, the anterior portion of the pregonite membranous and the number of spermathecae reduced to two. These characters were already discussed by Andersen (1996), but unfortunately I could not examine the male and female terminalia of *Trischidocera*. However, as illustrated by Chao and Zhou (1987), the enlarged surstylus in lateral view (figs 2b–c of Chao & Zhou 1987) and the enlarged, stout and curved pregonite (fig. 2c of Chao & Zhou 1987) seem to be similar to those of Siphonini.

Collecting efforts are required in China, Taiwan and southeastern Asia to obtain additional specimens of *Trischidocera*. The study and dissection of additional males and females of both *T. sauteri* and *T. yunnanensis* will certainly enhance its morphological characterization and will subsequently allow a more conclusive decision about the systematic placement of *Trischidocera*. In Siphonini, there are genera in which modified forms of postpedicels (bilobed, trilobed or pectinate) have independently appeared (O'Hara 1989), like *Ceromya* Robineau-Desvoidy and *Actia* Robineau-Desvoidy in which some species have a bilobed postpedicel, *Peribaea* Robineau-Desvoidy which can have a bilobed, trilobed, or pectinate postpedicel, and *Borgmeiermyia* Townsend in which all species have a pectinate postpedicel (O'Hara 1989; Andersen 1996; Nihei & Toma 2010).

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